



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/764,621	01/18/2001	Takatoshi Tsujimura	JP919990067US1	7849
48150	7590	06/02/2005		
MCGINN & GIBB, PLLC 8321 OLD COURTHOUSE ROAD SUITE 200 VIENNA, VA 22182-3817			EXAMINER NGUYEN, DUNG T	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary

Application No.

09/764,621

Applicant(s)

TSUJIMURA ET AL.

Examiner

Dung Nguyen

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9-18 is/are pending in the application.
- 4a) Of the above claim(s) 3 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-7 and 9-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Applicant's amendment dated 03/04/2005 has been received and entered. By the amendment, claims 1-2, 4-7 and 9-18 are now pending in the application.

Applicant's arguments dated 03/04/2005 have been considered but are moot in view of the new grounds of rejection as follow:

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 13, it is confusing and unclear whether "a display electrode" in claim is the same as based claim 1. In addition, if such display electrodes are the same, it is unclear how the display electrode can be formed on the polymer layer (i.e., first polarization layer) while the first polarization layer formed on the display electrode as recited in claim 1.

Appropriate correction is required

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2871

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al., US Patent No. 6,417,899, in view of Ichihashi, US Patent No. 6,686,980.

Regarding claims 1-2, Jones et al. disclose a liquid crystal display (LCD) device (figure 2) comprising:

- . an array substrate (3) having a driving element (thin film transistors, TFTs), a display electrode (7);

- . a first polarization layer (53);

- . a liquid crystal layer (11);

- . a color filter substrate (29) having a color filter (23/25/27), a common electrode (15),

wherein the first polarization layer is set between the array substrate and the color filter substrate;

- . a second polarization layer (31);

- . a backlight unit (51), wherein light reflected from the array substrate inherently returns to the backlight unit without passing through other layers., so that the brightness of the liquid crystal display is improved compared to the case of an LCD having light reflected from the array substrate returns to the backlight unit passing through a polarization layer.

Jones et al., however, do not disclose the first polarization layer over the display electrode. Ichihashi does disclose a polarizing film (16) can be formed over a display electrode (ITO film 12). Therefore, it would have been obvious to one skilled in the art at the time of the

invention was made to employ a polarization layer over a display electrode as shown by Ichihashi in order to obtain an LCD device having excellent visual angle characteristic (col. 3, line 15).

5. Claims 4-6, 11-12, 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al., US Patent No. 6,417,899, in view of Ichihashi, US Patent No. 6,686,980, further in view of Applicants admitted prior art (APA), figures 11-12.

Regarding the above claims, the modification to Jones et al. discloses the claimed invention as described above; the modification to Jones et al. does not explicitly disclose a switching element (reflecting gate/source/drain electrode). APA does disclose an array substrate comprising a switching element as claimed (see figures 11-12). Therefore, it would have been obvious to one skilled in the art at the time of the invention was made to form a switching element (i.e., thin film transistor, TFT) for driving a display device. In addition, since the switching element formed underneath the polarization layer (as modified by Ichihashi), all light reflected would return back to backlight without passing any layers.

Regarding claims 11-12, although Jones et al. do not disclose a polymer layer having a polarization elements as a polarization layer, Ichihashi does disclose a polymerizable dichroic dyes can be used for forming an anisotropic film having a polarizing property (i.e., polarization layer). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the Jones et al. first polarization layer (53) by a polymer layer and having a polarization property as shown by Ichihashi in order to improve a display characteristic (e.g., visual angle characteristic) (col. 3, line 15). It should be noted that part of the display electrode would inherently connecting to the TFT for driving purposes.

Art Unit: 2871

6. Claims 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al., US Patent No. 6,417,899, in view of Applicant's submitted prior art, Yoshihiro, JP 9-331066.

Regarding the above claims, Jones et al. disclose the claimed invention as described above except for a reflection film. Yoshihiro does disclose a reflection film (28, 30) being formed in an area (e.g., gap) between the display electrode and the wiring (of the TFT) over the array substrate (figure 1) corresponding to an area in the liquid crystal layer in which a liquid crystal material is orient in a not-purposed direction (i.e., a direction different from an original orientation direction, outside display region) when applying a voltage to the liquid crystal layer. Therefore, it would have been obvious to one skilled in the art at the time of the invention was made to form a reflection film in the Jones et al. device as shown by Yoshihiro in order to improve a display contrast in an LCD device (see abstract).

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al., US Patent No. 6,417,899, in view of Applicant's submitted prior art, Yoshihiro, JP 9-331066, further in view of Ichihashi, US Patent No. 6,686,980.

Regarding claim 9, the modification to Jones et al. discloses the claimed invention as described above except for the polarization layer formed between the array substrate and the color substrate. Ichihashi does disclose a polarizing film (16) can be formed over a display electrode (ITO film 12). Therefore, it would have been obvious to one skilled in the art at the time of the invention was made to employ a polarization layer over a display electrode as shown by Ichihashi in order to obtain an LCD device having excellent visual angle characteristic (col. 3, line 15).

Note: claim 13 has not been rejected or indicated allowable since the scope of claims 13 is not clear. Applicant need to amend such claim in order to clarify the claimed invention.

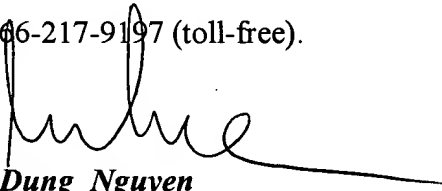
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Nguyen whose telephone number is 571-272-2297. The examiner can normally be reached on Tuesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DN
05/25/2005


Dung Nguyen
Primary Examiner
Art Unit 2871